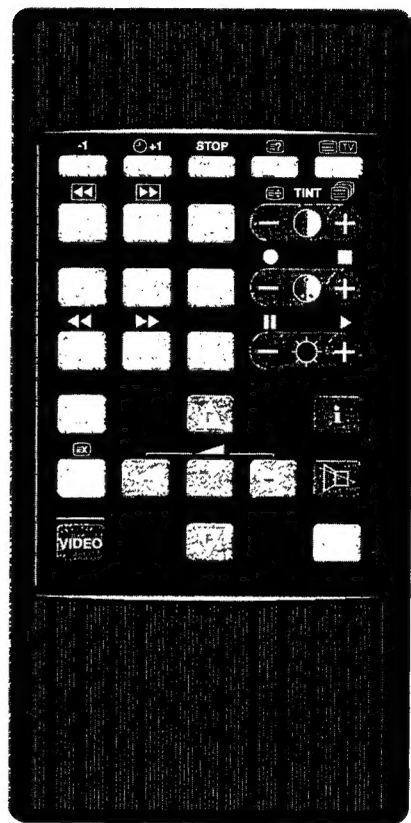
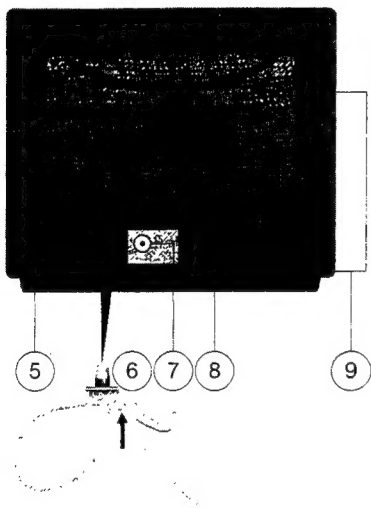
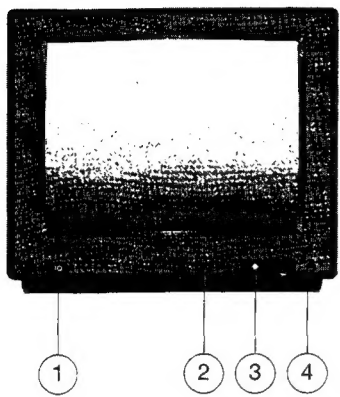


TV COLOR TELEVISION

GRUNDIG



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Information for the Technically Interested User

Your Grundig TV receiver offers the great advantage that all adjustments can be effected exclusively by means of the remote control handset.

The selected functions are displayed on the picture screen (**OSD = On Screen Display**).

Further useful features:

- Text messages possible in 9 languages.
- Sleep Timer, adjustable from 1 to 99 minutes.
- 49 programme positions and 1 AV position.
- Automatic Tuning System ATS
- Programme lock (childproof lock)

Safety considerations

Always make sure that the set is **not exposed to dripping or splashing water**.

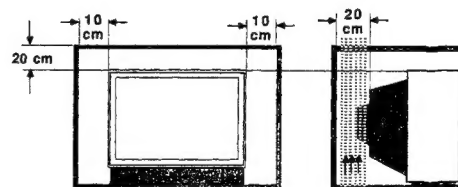
Protect the unit against humidity!

Do not **obstruct** the **ventilation slots** in the back panel.

Do not place the set in the immediate vicinity of a heat source.

A **build-up of heat** represents a **source of danger** and reduces the life of the set.

When operating the receiver in a closed cabinet (also in a cabinet), certain minimum distances must always be maintained see figure.

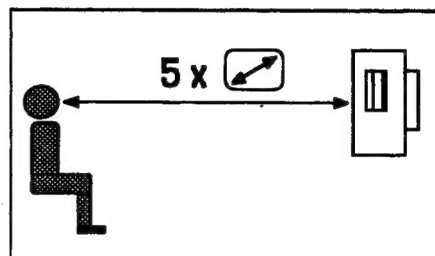


Notes on Positioning and connecting the TV Receiver

- ① Mains switch for switching on and off.
- ② Infrared receiver (point the remote control handset in this direction)
- ③ Receiver in standby mode – an illuminated dot is visible in the display.
- ④ Headphone socket, \varnothing 3.5 mm – switches off the built-in loudspeaker.
- ⑤ EURO-AV socket. Universal connection, DIN EN 50 049 eg: for video and RGB connection.
- ⑥ Cable tie as strain relief for the Euro-AV cable.
 - To open the cable tie → press nose in direction of arrow.
- ⑦ Aerial socket, 75 Ω , coaxial, DIN 45325 IEC 169-2
- ⑧ Mains connection
- ⑨ Recessed grips (on both sides)

Position the TV receiver so that as little stray light as possible falls on the screen.

The ideal viewing distance from the set is five times the screen diagonal -see figure.



The Buttons on the Remote Control Handset

1-0 For selecting programmes and switching on from standby.

AV

- For directly selecting channels/special channels.
- For selecting the AV position.

P/C For selecting programmes/channels/special channels.

- For calling up ATS (automatic channel search) [keep pressed for about 3 sec].

VIDEO For remotely controlling a video recorder (keep pressed the VIDEO button).



- For stepping through the programme positions (1, 2, 3, ...) and switching on the set.



- For stepping through the programme positions (...3, 2, 1)
- For moving up and down the cursor in the displayed menu to make a choice.

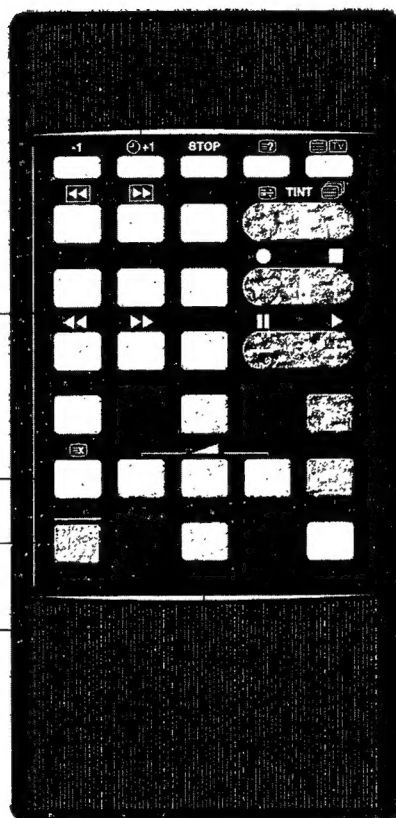


Volume up/down

- For moving left and right the cursor in the displayed menu to make a choice.

OK - For calling up the stored basic settings of the TV set (picture and sound).

- For confirming entered values (storing in memory).



For letting appear/disappear the clock time indication. Only possible with built-in Teletext decoder and during Teletext broadcasts.

Black/white contrast

Colour contrast

Brightness

The values are directly modified by means of the respective rocker button.

For letting appear/disappear the MENU (keep pressed the button for approx. 3 sec. and select the menu with button OK)

- For letting appear/disappear the programme indication with station identification

For switching on and off the TV sound (when muted, the corresponding symbol appears on the TV screen).

For switching to standby. An illuminated dot is visible in the display of the TV set.

Adjusting TV Programmes

The **remote control handset** represents the central control unit for your TV receiver. It permits to perform all control functions and basic adjustments for the receiver.

- Insert the supplied battery observing the polarity indications on the bottom of the battery compartment. Close the compartment cover.
- Should your TV receiver no longer correctly respond to the remote control commands, the battery is probably exhausted. Immediately remove an exhausted battery. No responsibility will be taken for damage caused by a leaking battery.

Adjusting TV programmes

TV stations transmit television programmes on different channel, eg: the German TV station Dillberg the "First Programme" (ARD) on channel 6.

The TV programmes offered by the TV stations must be "placed" on the programme positions of the TV set.

The adjustments required for this must only be carried out for the initial setting up of the set or when the reception conditions have changed (eg: in the case of relocation or connection to a cable TV system).

There are four possible methods for allocating TV programmes to the programme positions of the TV receiver:

1. With **ATS**, the automatic channel search.
 - This method is recommended if you do not know the channel numbers of the received programmes.
2. By **directly entering the channel numbers**.
 - This is the fastest method, provided you know the channel numbers.
3. With the **manuel channel search**.

4. By **entering the channel numbers in the menu**.

- This is the most detailed of the four programming methods and offers in addition the possibilities of entering a station abbreviation and fine tuning the picture sharpnes.

If you have decided on **one** of the **four tuning possibilities** and have performed the required adjustments, you need not perform in addition the remaining possibilities.

Switching on

- Switch on the TV set with the mains switch I/O ①.
- The programme position 1 is automatically selected and the indication P1 appears in the display of the receiver.
- On the picture screen the indication P1 and a station abbreviation (if programmed) are briefly visible.

Volume

- Adjust the desired volume with the buttons ◀▶ on the remote control handset (if you find the preset value too high or too low).

Adjusting TV Programmes

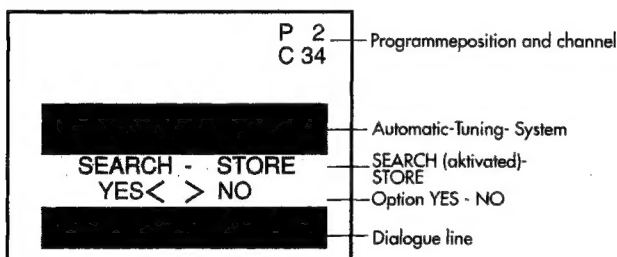
1. Adjusting TV programmes with the help of ATS

- ATS** – (Automatic-Tuning-System) is an automatic channel search system.
- ATS** – helps you in a quick and simple way to adjust all offered TV programmes even if you do not know the channel numbers.
- ATS** – the automatic channel search will automatically stop as soon as it has found a channel on which a programme is broadcasted.

How to proceed:

Calling up ATS

- Press and keep button **P/C** for approx. 3 sec.
- The Automatic-Tuning-System **ATS** and the programme position with the channel number appear on the picture screen.
- Indications in red letters are activated.



Starting ATS

- Press button **◀**: **YES** is activated.
- **ATS** is started with channel number **C00** and will stop as soon as it has found a channel on which a programme with sufficient signal strength is broadcasted.
- Programme position **P1** is automatically selected.

Storing a channel number in memory

Using **ATS** you have found a programme on programme position **P1** and wish to store this allocation in memory.

- Press button **◀** The channel number of the found programme is stored in memory (< YES).
- In addition to the channel number of the found programme, the programme position **P**; is also stored in memory.
- Programme position **P2** is automatically called up and the **ATS** system is started again to search the next programme.
(Manual selection of programme positions is not possible. To return to programme position **P1**, you must exit **ATS** and start anew).

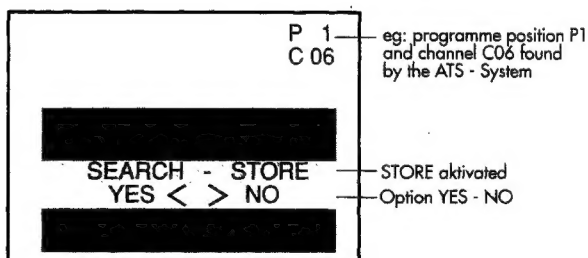
If you do not wish to store the channel number

because you intend to allocate the respective programme position to a different programme (channel)

- press button **▶**. The channel will not be stored (> NO).
- The programme position **P1** is not changed and the channel search system is started again.

The **ATS** channel search system scans the whole channel range from **C00** to **C99** and **S01** to **S99**.

It is possible to exit the **ATS** function with button **i**.



Adjusting TV programmes by directly entering the channel numbers

2. Directly entering the channel number

Example:

The "Second Programme" (ZDF) is broadcasted on channel 34 and you wish to allocate it to programme position 2.

How to proceed:

Selecting a programme position

- Press the numbered button **2** or step to the programme position 2 with button **+** or **-**.
- The indication **P2_** (for two-digit entries), appears in the display. If no two-digit entry is made, the indication will change for 1-digit entry after a short period of time.

Selecting the channel mode

- Press button **P/C**.
- The letter **C** (**C** stands for channel) and a number between 00 and 99 appear in the display and on the picture screen.

- If you can receive cable TV programmes on special channels and you wish to adjust such a programme, then press the button **P/C** once again.
- The letter **S** (**S** stands for special channel) appears in the display and on the picture screen.

Entering the channel number

- When the programme position and a channel number are visible, eg: $\begin{smallmatrix} P2 \\ C34 \end{smallmatrix}$, press the numbered buttons **3** and **4**.
- In doing this, you have entered the channel number 34

Storing the channel number in memory

- During the indication of the programme position and the newly entered channel number, press button **OK**. The message **MEMO → OK** will appear.
- When this message is visible, press button **OK** once again.
- The channel number is stored in memory.

Adjusting TV programmes with the help of the manual station search system

3. Adjusting TV programmes with the help of the manual station search system

Example:

You are receiving the programme SAT1 on one of the special channels (S01-S99) and wish to allocate this programme to programme position P6 legen.

How to proceed:

Selecting the programme position

- Press the numbered button **6**.
- Programme position P6 is selected.

Selecting the channel mode

- Press button **P/C** twice.
- The letter **S** (**S** stands for special channel) appears in the display.

Starting the manual station search

- Press and keep pressed button **▲** (to search upwards) or button **▼** (to search downwards).
- The channel search stops at each channel on which a programme is received.
- If the found programme is not the desired one, start the channel search again (with button **▲** or **▼**) until you get the desired programme (SAT1).


Storing the channel number in memory

- During the indication of the programme position and the found channel number, eg: $\begin{smallmatrix} P6 \\ S40 \end{smallmatrix}$, press button **OK**. The message **MEMO → OK** will appear.
- When this message is visible, press button **OK** once again.
- The channel number is stored in memory.

The Menu

4. With the Menu

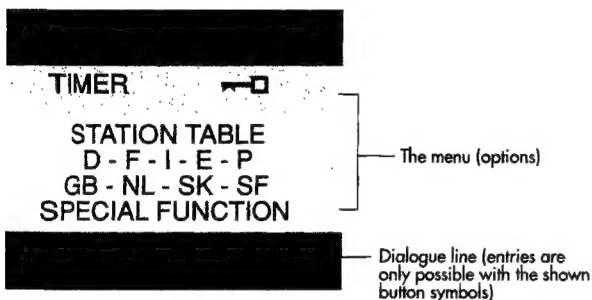
it is possible to select various functions and make adjustments with the help of dialogue lines. You have the choice between four menu options:

- TIMER and  (programme lock)
- PROGRAMME (with station identification and fine tuning)
- Language selection.
- Special functions.

Calling up the menu

How to proceed:

- Press and keep button **i** until the message **OK → MENÜ** appears.
- Press button **OK** while this message is visible. The **MENÜ** will appear on the picture screen.
- You can exit the menu by pressing button **i**.



Selecting a language

It is possible to select between several languages for the dialogue with your TV receiver. After having made a choice, the messages on the picture screen will appear in the respective language. It is therefore recommended to make this choice at first.

How to proceed:

- Press button **▼** two times.
- The menu option - **SPRACHAUSWAHL** - (Select Language) will be highlighted on blue background.
- Press button **OK**.
- The select-language function is activated and the selected language is highlighted in red letters.
- Select the desired language with button **◀** or **▶**.
- From now on, all messages will be in the selected language.
- Press button **OK**.
- The selected language is stored in memory and will be highlighted in yellow letters.

The Menu

Adjusting TV programmes

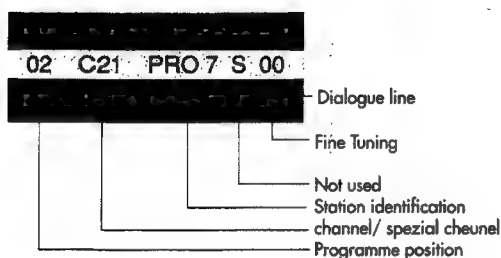
Example:

The "Third Programme" is broadcasted on channel 59 and you wish to allocate it to programme position P3 and to enter the station abbreviation (identification) BR3. Please ask your specialized dealer on which channels further programmes can be received in your area.

How to proceed:

Selecting a programme position

- Press button **▼**.
 - The menu option – **STATION TABLE** – is highlighted on blue background.
- Press button **OK**.
 - The respective activated position is shown in red letters.
 - The data of the current programme position appears on the TV screen.



Entering the channel number and station identification

- Press button **►**.
 - It is now possible to switch over between channel and special channel entry. For this
- press button **▲** or **▼**.
 - The letter **S** (= special channel) appears.
 - Press button **▼** or **▲** again to switch back to the indication **C** (C = channel).
- Press button **►**.
 - Enter the desired channel number **as two figures** with the numbered buttons.
 - If you do not wish to make further entries (station identification, fine tuning), then
- press button **OK**.
 - The channel number is stored in memory.

It is also possible to select the desired channel number step by step with button **▲** or **▼**. If the respective button is pressed and kept down, the channel search system is started and stops at each channel on which a programme is received.

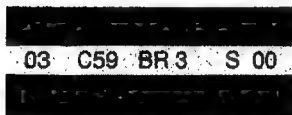
- You now have entered channel 59 on programme position 3.
- Now you can enter the station identification BR3.
- For entering station identifications, four positions are available for each programme position. These positions can be filled with letters, figures or special characters (eg: a blank for spaces) of your choice.

- Use button **▲** or **▼** to select the desired programme position.

The Menu

How to proceed:

- Press button ►.
- The first position of the station identification is activated.
- Press button ▲ or ▼ (▲ to move up: ABC..., ▼ to move down: ...CBA) until the letter B appears.
- Press button ►.
- The next position for entering the letter R is activated.
- Press button ▲ or ▼ until the letter R appears.
- Repeat the above steps until the full station abbreviation BR3 is entered.
- Following the above example, you have allocated the channel number C59 and the station abbreviation BR3 to the programme position.
- If you wish to make no further entries, the,
- press button OK.
- The channel number and the station identification are stored in memory.



Fine tuning – picture sharpness

The TV set will automatically tune to best picture sharpness. However, on difficult reception conditions, it may occasionally be necessary to alter the setting of the picture sharpness, i.e. to adapt the tuning point to the reception or signal conditions. This is done with the help of the **FINETUNING** menu option.

How to proceed:

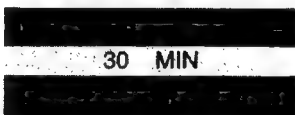
- Repeatedly press button ► until the figures below the letters FT become green.
- Press button ▲ or ▼.
- This permits to alter the medium fine tuning value to + or – until the best picture impression is obtained (from 63–...64).
- Press button OK to store the modified value in memory.
- When storing is completed, the programme data of the next programme position appears on the picture screen.
- Briefly press button i to return to the **main menu**.

TIMER

It is possible to activate the **Timer** of your TV set for a duration of 01 to 99 minutes, after which the set will automatically be switched to standby.

How to proceed:

- Press button OK to activate (red letters) the "**Timer**" indication in the first option line of the main menu.
- Press button OK. The **SLEEP-TIMER** menu appears on the picture screen.



- Adjust the desired time period with the numbered button 0...9 or with button ▲ or ▼ (15 minutes steps).
- Store in memory with button OK.
- You are in the main menu again.
- When the adjusted time period has elapsed, the TV receiver is switched to standby.
- Entering "**00 MIN.**" will deactivate the sleep timer.

The MENU

The programme lock (childproof lock)


The programme lock permits to protect your TV receiver against use by unauthorized persons (eg: children).

How to proceed:

- Press button **OK**
- Select the symbol \rightarrow in the first line of the main menu with button \blacktriangleleft or \blacktriangleright .
- Press button **OK**. The programme lock menu appears on the picture screen.
- Enter a four digit code number (eg: 1111) with the numbered buttons 0...9.
- Press button **OK**.
- The code number is stored in memory.



Please note down your personal code number!

If you should forget or mislay your code number, the  on the last page will help you. Pressing this combination of buttons will cancel the code number.

Cancelling the programme lock – unlocking the unit

If you switch on the locked TV receiver, you will be prompted to enter the code number.



How to proceed:

- Enter your code number with the numbered buttons 0...9 (hidden entry XXXX)
- The unit is automatically switched to TV operation.

Erasing the code number

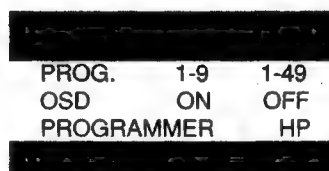
- Press button **OK**
- Select the symbol \rightarrow in the first line of main menu with button \blacktriangleleft or \blacktriangleright
- Press button **OK**: The childproof lock menu appears.
- Enter your stored code number as 4 figures with the numbered buttons 0...9 (eg. 1111).
- The code number is erased.

Restricting programme selection

If you need only the programme positions 1 to 9 out of the 49 programme positions, you can restrict programme selection correspondingly.

How to proceed:

- Select the menu option – **SPECIAL FUNCTIONS** – with button \blacktriangle or \blacktriangledown .
- Press button **OK**.
- The menu – **SPECIAL FUNCTIONS** – appears on the picture screen.



- The first menu option – **PROG.** – is activated.
- Press button **OK**.
- Press button \blacktriangleleft or \blacktriangleright .
- This switches the receiver to **one digit** programme selection mode (programme positions 1 to 9).
- Press ing button \blacktriangleleft or \blacktriangleright again switches back to **two digit** programme selection mode (eg. P 10).
- Press button **OK**.
- Your choice is stored in memory.
- Restricting programme selection has no effect if you select the programme positions with button \blacktriangle or \blacktriangledown .

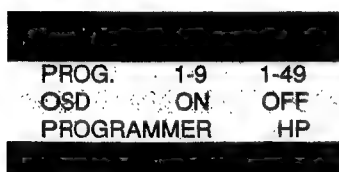
The Menu

Switching on and off the bar indication

In the manu line – **OSD ON OFF** – you have the choice between

OSD ON: The bar indications for volume, colour contrast, black/withe contrast as well as the station identification are switched on.

OSD OFF: The bar indications for volume, colour contrast, black/white contrast as well as the station.



How to proceed:

- Select the menu line **OSD ON OFF** with button ▲ or ▼.
- Press button **OK**.
- Press button ◀ or ▶.
 - This switches to **OSD OFF**.
- Pressing button ◀ or ▶ once again switches back to **OSD-ON**.
- Press button **OK**.
 - The choice you made is stored in memory.

The menu option **PROGRAMMER HP** is provided for the automatic programming of your TV receiver.

This programming can only be performed by your specialized dealer, provided he is in the possession of an **IR DATA-PROGRAMMERS** unit.

Picture and Sound Corrections

You can correct all picture and sound settings according to your personal taste.

Changing the volume

How to proceed:

- Press button ◀ (volume down) or ▶ (volume up) as long as required.
- The volume setting is shown in a scale on the picture screen.



Changing picture settings

- If you wish to modify a picture setting, press on the – or + side of the respective rocker button as long as required.

Black/white contrast ①

Colour contrast ②

Brightness ③

- Each picture value is displayed in a scale on the screen.

- If the **OK** button is pressed after the scale has disappeared from the screen, the value before the modification will be retrieved.

Storing a modified value in memory

- If you wish that a modified setting be permanent, then press button **OK** while the respective scale is visible on the screen.

MEMO → OK

The message will appear

- While this message is visible, press button **OK** again.
- The new setting is stored in memory.

Switching off the television sound

- Button ④ permits to switch on and off the television sound.
- When the sound is switched off, the symbol ④ will be displayed.
- The television sound is also switched on again when pressing the volume button ▶ or when selecting another programme position.

Remote Control of a Video Recorder

You can also use the remote control handset of this TV receiver for remotely controlling a **video recorder**. To find out which video recorders are suitable for this purpose, please ask your dealer.

- Press and keep pressed button **VIDEO**.
In doing this, the remote control is switched to video recorder operation.
- Now press the desired function button.

The following listing shows you the functions that can be remotely controlled.

- ⏮ (numbered button 1) = Picture search, reverse
- ⏭ (numbered button 2) = Picture search, forward
- (button – ③) = Recording start
- (button + ③) = Stop
- ⏮ (numbered button 7) = Fast rewind
- ⏭ (numbered button 8) = Fast forward wind
- ⏸ (button – ④) = Pause
- ▶ (button + ④) = Playback start

Teletext Operation (only with built-in Teletext decoder)

Units of the type **T 51-540 text** are provided with a Teletext decoder.

They have enclosed a separate Teletext operating instructions.

Calling Up the Clock Time

- Press button **⊕+1** to switch on and off the clock time indication.
(Only with built-in Teletext decoder)

Calling Up the Programme Indication Mode

- It is possible to let appear and disappear the programme indication (programme identification as abbreviation, eg: P2 C34, depending on the selected mode P/C/S) on the picture screen by briefly pressing button **1**.

Switching the TV Receiver to Standby

- It is possible to switch the TV receiver during television pauses to standby.

How to proceed:

- Press button **⊖**.
 - The TV receiver is switched to standby.
 - A dot will light up in the display **③** of the receiver.

- Approximately 10 minutes after station sign-off or transmission failure, your television automatically switches to standby.

- Press one of the numbered buttons 1...9 or the button **▲** to switch the receiver on again.

Switching Off the TV Receiver

- If you do not use the TV receiver for a longer time (eg: during the night) switch it off with the mains switch **①** on the set.

Connecting Possibilities and Operation ...

... with a headphone

How to proceed:

- Insert the headphone plug (3,5mm ø Jack plug) into socket ④.
- Adjust the desired volume with button ◀ or ▶.
- The volume setting is indicated in a scale on the TV screen.

... with a video recorder, camera recorder or descrambler

The descrambler (decoder) is an add-on unit for decoding encoded programmes, e. g., PAY-TV.

How to proceed:

- Connect the video recorder, camera recorder or descrambler with an appropriate connecting lead to the **EURO-AV socket** ⑤ (at the back of the unit), or with an aerial lead (75 Ω) to the **aerial socket** ⑦ (at the back of the unit; do not use this socket for the descrambler).

Example:

Video- or camera recorder connected to Euro-AV socket ⑤.

- Press button **AV** on the remote control handset.
- The programme position indication **AV** appears in the display.
- Start playback of the recorder. The playback is visible on the screen of the TV receiver.

The picture/sound signal of the video- or camera recorder connected to the EURO-AV socket ⑤ **can also be switched to any other programme position.**

On the video recorder operation with 60Hz, enter and store **AV 60** as station identification (**NAME**) for the programme position concerned in the **STATIONS TABLE** (see MENU – Entering the channel number and station identification).

How to proceed (z.B. bei Descrambler betrieb):

- Select the desired programme position, eg: P25.
- Press the **numbered buttons 2 and 5.**
- Select the **Programme** option in the MENUE.
- Press button **1** (2 x) for approx. 3 seconds and press button **OK** to call up the MENUE.
- Select the **Programme** option.
- Press button **▼** and then button **OK.**
- With **NAME** activated (station identification), enter **EXT-** on the first positions.
- Press button **▼** or **▲** as often as required and activate the first position with button **▶.**
- Press button **OK** to store the setting in memory.
- Press button **1** (2x) to return to the television picture.

Example:

Video- or camera recorder connected to the aerial socket ⑦.

Programme the playback channel specified for your video recorder (between 30 and 40) on any desired programme position (eg: P16). You should normally find the playback channel in the operating instructions of your recorder.

If you nevertheless do not know the playback channel, start playback of the recorder and search the channel with the automatic channel search system of the TV receiver.

Note down the selected programme position for later video playback.

It is possible to correct the sharpness of the video picture if this should be required (see chapter "Fine Tuning – Picture Sharpness" in the MENUE).

- Select the **Programme** option in the MENUE.
- Select the desired programme position, eg: P15
- Enter the VCR playback channel, eg: C38.
- With **NAME** activated in the **MENU**, enter **AV--** on the first two positions (time constant switch-over), eg: **AV--** (Leerzeichen--).
- Press button **OK** to store the setting.
- Press button **1** (2 x) to return to the TV picture.

Specification

Mains voltage:

220–240 V~ 50/60 Hz
(control range of the mains section 190...264 V)

Power consumption:

approx. 55 Wh

Channel coverage:

01 ... 99
and the special channels S 01 ... S 99

Sound output:

4 W music power

This equipment meets the international safety and interference regulations.

If your unit malfunctions, it is essential that you contact your dealer. Under no circumstances should you open the set yourself.

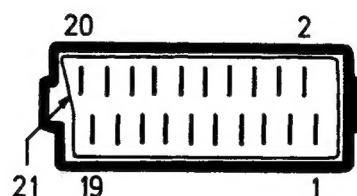
The manufacturer accepts no responsibility for damage which occurs under such circumstances.

Subject to alteration
E. and O.E.

Pin Connections of the EURO-AV Socket ⑤

If you wish to connect peripheral units (eg: computer, amplifier) to your TV receiver, the following table will enable your specialized dealer to make the correct standard connection.

Pin	Signal
1	= Audio output, RH
2	= Audio input, RH
3	= Audio output, LH
4	= Audio, chassis return
5	= Blu, chassis return
6	= Audio input, LH
7	= RGB blu input
8	= Switching voltage
9	= Green, chassis return
10	= -
11	= RGB, green input
12	= -
13	= Red, chassis return
14	= Chassis return
15	= RGB, red input
16	= RGB, switching voltage
17	= Video, chassis return
18	= RGB switching voltage, chassis return
19	= Video output
20	= Video input
21	= Screening/chasses return



Hinweis für den Fachhändler (Kanäle ohne Feinabstimmung einstellbar)

Anzeige	Kanal	Standard
C01	E1	CCIRB:C
C02	E2	"
C03	E3	"
C04	E4	"
*	*	"
C10	E10	"
*	*	"
C12	E12	"
C13	A	B, Italien
*	*	"
C20	H	"
C21	21	CCIRG, H, I, K, L
*	*	"
C69	69	"
C70	70ex	"
*	*	"
C73	73ex	"
C74	X	CCIR Kabel
C75	Y	"
C76	Z	"
C77	Z+1	"
C78	Z+2	"
C79	2	OIR
C80	5	"
C81	E1	CCIR-Raster Norm 1...6
*	*	"
C90	E10	"
C91	E1	ZF-Lage gedreht
*	*	"
C94	E4	"
C95		frei
*		"
C99		"
S01	S1	CCIR Kabel 7 MHz
*	*	"
S20	S20	"
S21	S21	CCIR Kabel Hyperb. 8 MHz
*	*	"
S41	S41	"
S42		frei
*		"
S49		"

Information for the specialized dealer
 Anvisningar för fackhandlare
 Henvising til faghandleeren
 Vihteittä kauppiaille.
 Advertencia para distribuidores

